

Course Syllabus – Technical Drafting

Assignment Code

Course Description

Aim: People with careers in design and pre-construction create our future.. Their plans guide manufacturing professionals as they continue the building process. Students are introduced to tools and methods used by a skilled draftsman and engineers.

Grade Level: 9th - 12th Grade
Prerequisites: None

Length: Semester Course
50 min. period

- **Topics Covered:**
- Concepts of drafting
- Proper tools and safety
- Orthographic projections
- Geometric construction
- Sectional views
- Fasteners
- Simple CAD applications
- Math and Reading skills

Instructional Philosophy and Delivery Plan

Expectation: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 68%.

Delivery Method: Instruction will consist of individual hands on activities and projects, group work, lecture, discussion, reading, writing, self-assessment, and the use of technology. Skills USA projects can be incorporated into the course.

Community Involvement: Guest speakers from local business such as Architectural firms, Industry Engineers, and lumber yards will be brought in throughout the course. Learning trips will be taken for various units in the course. Students will also have to use community resources to complete individual and group projects.

Assessment: Students will be graded on the following items: presentations, written reports, tests, daily work, group work, and individual projects.

Course Standards

TD1.1. Define basic drafting tools and techniques used on technical drawings

TD1.2. Integrate geometric construction for technical drafting

TD1.3. Define dimensioning styles and techniques on metric and imperial drawings

TD1.4. Demonstrate various drawing scales used in technical drafting

TD1.5. Identify proper terminology and examine career possibilities

TD2.1. Create multi-view and orthographic projections

TD2.2. Illustrate isometric and pictorial drawings

TD3.2. Apply Cad software in technical design

TD2.4. Demonstrate various threads and fasteners used in design.

TD2.5. Integrate various drawings to create a detailed assembly.

TD3.1. Compare computer aided software used in technical design

TD2.3. Create sectional views and conventions

Major Course Projects

- Basic Orthographic projection of a simple part
- A 2-D assembly drawing of a Vise Clamp
- Reverse Engineering of an existing project
- Research Careers and Employment possibilities

Assessment Plan & Grading Scale

Grade Scale		Description of Work
A	92 - 100%	Consistently demonstrates an exceptional level of quality and effort. Having all work in on time and completed to exceed expectations. Mastery in evaluating, synthesizing, and applying the knowledge.
B	84 - 91%	Consistently demonstrates proficient knowledge with a good effort and quality of work. All assignments are complete and on time. Demonstrates the ability to evaluate, analyze, synthesize and apply the principles.
C	76 - 83%	Demonstrates proficient knowledge and the ability to apply knowledge. Work shows average effort. A few assignments may be missed or late.
D	68 - 75%	Work shows minimal effort and some assignments are late. Demonstrates a basic understanding of recalling or comprehending knowledge
F	Below 68%	Understanding is below basic. Work is of poor quality and does not meet standards or expectations.